REMARKS

Claims in the case are 1-12, upon entry of this amendment. Claim 1 has been amended, no claims have been cancelled, and Claim 12 has been added by amendment herein.

Basis for the amendment to (c) of Claim 1 is found at page 6, lines 26-28 of the specification.

Basis for added Claim 12 is found in original Claim 2, and at page 5, lines 15-26 of the specification.

The specification has been amended to include cross reference information, and to modify section headings.

Claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Youngkwan Lee, *Mol. Cryst. Liq. Cryst.*, 1999, Vol. 327, pp. 237-240 (**Lee et al**). This rejection is respectfully traversed in light of the following remarks.

Lee et al disclose a method of preparing poly(3,4-ethylenedioxythiophene) which involves: first dissolving ethylenedioxythiophene (EDOT) and dodecylbenzenesulfonic acid (DBSA) in a solvent (e.g., methanol); and then slowly adding an oxidant solution of ferric toluenesulfonate (FTS) to the combination of EDOT, solvent and DBSA, to conduct the polymerization. See the abstract; page 238, Experimental; and page 239, Table 1 of Lee et al.

Lee et al only disclose a method of preparing poly(3,4-ethylene-dioxythiophene) that involves the use of a transition metal oxidant (i.e., ferric toluenesulfonate). Lee et al provide not disclosure, teaching or suggestion with regard to polymerizing EDOT in the absence of a transition metal oxidant. The method of Applicants' present claims is exclusive of transition metal oxidants. The method of Applicants' claims involves the polymerization of a thiophene in the presence of an oxidant that is selected from the group consisting of alkali metal peroxodisulfate, ammonium peroxodisulfate, alkali metal percarbonate and combinations thereof.

Still further, Lee et al does not disclose, teach or suggest performing the polymerization of EDOT in the presence of a phase transfer catalyst. A phase transfer catalyst, like a conventional catalyst, is renewed during the course of the reaction in which it is employed, but unlike a conventional catalyst, shuttles back and

forth between two different phases. Typically, a phase transfer catalyst shuttles back and forth between a phase in which a primary reaction (e.g., a polymerization reaction) is occurring (i.e., a reactive phase), and a phase in which the primary reaction is not occurring (i.e., a non-reactive phase). Phase transfer catalysts typically serve to remove ions from the reactive phase and deposit them in the non-reactive phase, as they shuttle back and forth between the two phases. The method of Applicants' present claims is performed in the presence of a phase transfer catalyst.

"Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference." *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000).

In light of the preceding remarks, Lee et al does not disclose, teach or suggest the process of Applicants' present claims. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 2 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by DE 198 41 804 A1. This rejection is respectfully traversed in light of the following remarks.

DE 198 41 804 A1 will be discussed herein with reference to CA 2,343,444 A1, which is an English language equivalent of DE 198 41 804 A1 (collectively **Pielartzik et al**). A copy of CA 2,343,444 A1 is included in the Appendix herewith.

Pielartzik et al disclose a method of coating substrates (e.g., paper or plastic films) with electrically conductive structures by means of inkjet printing. A polymer solution that includes water-dispersible polyalkylene dioxythiophenes is used in the inkjet printing step. See the abstract, and page 1, lines 3-6 of Pielartzik et al.

Pielartzik et al disclose polyalkylene dioxythiophenes containing monomer residues as represented by their formulas (I), (Ia), (Ib), (Ia-1) and (Ib-1). See pages 3 and 4 of Pielartzik et al. Applicants wish to point out that, contrary to the assertions made on page 3 of the Office Action of 28 October 2004, Pielartzik et al do not disclose a monomer residue corresponding to Applicants' Formula-(III).

The monomer represented by Applicants' Formula-(III) includes ethylenic unsaturation in the carbon chain bridging the two oxygens of the dioxy ring thereof. The monomer residues disclosed by Pielartzik et al do not include such unsaturation.

Pielartzik et al disclose polymerizing 3,4-ethylenedioxythiophene (EDOT) in the presence of oxidants peroxydisulphate and iron(III) sulphate, and water. See Example-1, page 6, lines 10-20 of Pielartzik et al.

The method of Pielartzik et al is necessarily performed in the presence of a transition metal oxidant (i.e., iron(III) sulphate). Pielartzik et al does not disclose, teach or suggest performing their polymerization in the absence of a transition metal oxidant. The method of Applicants' present claims is exclusive of transition metal oxidants. The method of Applicants' claims involves the polymerization of a thiophene in the presence of an oxidant that is selected from the group consisting of alkali metal peroxodisulfate, ammonium peroxodisulfate, alkali metal percarbonate and combinations thereof.

The method of Pielartzik et al is necessarily performed in the presence of water. Pielartzik et al does not disclose, teach or suggest performing their polymerization in the presence of at least one anhydrous or low-water-content solvent. The method of Applicants' present claims involves the polymerization of a thiophene in the presence of an anhydrous solvent and/or a low-water-content solvent.

In addition, Pielartzik et al do not disclose, teach or suggest polymerizing EDOT in the presence of a phase transfer catalyst. As discussed previously herein, a phase transfer catalyst, like a conventional catalyst, is renewed during the course of the reaction in which it is employed, but unlike a conventional catalyst, shuttles back and forth between two different phases. Typically, a phase transfer catalyst shuttles back and forth between a phase in which a primary reaction (e.g., a polymerization reaction) is occurring (i.e., a reactive phase), and a phase in which the primary reaction is not occurring (i.e., a non-reactive phase). Phase transfer catalysts typically serve to remove ions from the reactive phase and deposit them in the non-reactive phase, as they shuttle back and forth between the two phases.

Pielartzik et al only disclose performing the polymerization of EDOT in the presence of a transition metal oxidant, and do not disclose teach or suggest the presence of a phase transfer catalyst. In addition, Lee et al provide no disclosure, teaching or suggestion with regard to polymerizing EDOT in the presence of a phase transfer catalyst.

In light of the preceding remarks, Applicants' present claims are deemed to be unanticipated by and patentable over Pielartzik et al. Reconsideration and withdrawal of the present rejection is respectfully requested.

In light of the amendments herein and the preceding remarks, Applicants' presently pending claims are deemed to define an invention that is unanticipated, unovbious and hence, patentable. Reconsideration of the rejections and allowance of all of the presently pending claims is respectfully requested.

Respectfully submitted,

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APPENDIX

Copy of CA 2,343,444 A1

Which is an English Language Equivalent of DE 198 41 804 A1.